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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/642,615

08/17/2000

David L. Multer

FUSN1-01017US0

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03/05/2004

LEV/JAV

EXAMINER

CHANNAVAJJALA, SRIRAMA T

VIERRA MAGEN MARCUS HARMON & DENIRO LLP

685 MARKET STREET, SUITE 540

SAN FRANCISCO, CA 94105

ART UNIT

PAPER NUMBER

2177

DATE MAILED: 03/05/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

PRG

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/642,615	MULTER ET AL	
	Examiner	Art Unit	
	Srirama Channavajjala	2177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 17 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to RCE***

**CONTINUED EXAMINATION UNDER 37 CFR 1.114 AFTER FINAL REJECTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission of Amendment filed on 8/28/2003, paper no. # 16, Amendment filed on 12/17/2003, paper no. 19 hereby entered, a non-final Office action, paper no. # 20 as detailed below:

2. Claims 1,11 have been amended, paper no.19.
3. Claim 18 has been added, paper no.19.
4. Examiner acknowledges applicants' amendment filed on 3/13/2003, paper no.11.
5. Claims 11 has been amended, paper no. # 11.
6. Claims 12-17 have been added, paper no. # 11.
7. Claims 1-17 are pending in this application.

***Specification***

8. Applicant has incorporated by reference three co-pending applications, at page 8 line 6-8, of the specification. Examiner notes that incorporation by reference of an application in a printed United States patent constitutes a special circumstance under 35 U.S.C. § 122 warranting that access of the original disclosure of the application be granted. The incorporation by reference will be interpreted as a waiver of confidentiality

of only the original disclosure as filed, and not the entire application file, In re Gallo, 231 USPQ 496 (Comm'r Pat. 1986). If Applicant objects to access to the entire application file, two copies of the information incorporated by reference must be submitted along with the objection. Failure to provide the material within the period provided will result in the entire application (including prosecution) being made available to petitioner. The Office will not attempt to separate the noted materials from the remainder of the application. Compare In re Marsh Engineering Co., 1913 C.D. 183 (Comm'r Pat. 1913).

Applicant has incorporated by reference three co-pending applications, at page 8 line 6-8, of the specification. Applicant hereby required to **update their status** in response to this office action, paper no. # 20

### ***Drawings***

9. Examiner acknowledges applicants' formal drawings filed on 3/13/2003, paper no.13.

### ***Information Disclosure Statement***

10. The information disclosure statement PTO-1449 filed on 12/26/2000, paper no. # 4, has been considered and a copy was enclosed with this office action, paper no. # 9,

11. The information disclosure statement PTO-1449 filed on 3/13/2003, paper no. # 12 has been considered and a copy was enclosed with this office action, paper no. # 14

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1- 6,8-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birkler, WO 00/29998 in view of Bowen et al., [hereafter Bowen], US Patent No. 5832519.

2. As to Claims 1,8, 11, 18, Birkler teaches a system which including 'updating application data in a client device of a data transfer and synchronization system' [see Abstract, fig 1, page 6, line 14-20], 'downloading a first change log of a plurality of change logs from a server system' [page 3, line 13-17, line 21-25], examiner interpreting

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change logs corresponds to Birkler's change log as detailed in fig 2, element 240, client device corresponds to first device, server system corresponds to second device as detailed in page 3, line 10, specifically, first device and second device entries are synchronized based on change log as detailed in page 3, line 13-17, 'each of said plurality of change logs reflecting changes to said application data' [page 4, line 4-11], 'adding said first change log, deleting said first change log' [page 7, line 22-25, page 12, line 4-7] , 'repeating said downloading, adding, and deleting steps for a next change log of said plurality of change logs until no additional change logs exist' [page 10, line 23-28, col 12, line 31-18]. It is however noted that Birkler does not teach 'aggregate change log, the aggregate change log comprising a summary of changes in said added change log and any previous change logs, applying said aggregate change log to said application data to update said application data'. On the other hand, Bowen et al teaches maintaining the data values such as aggregate numeric data values while allowing concurrent updates [see col 4, line 11-14], more specifically Bowen teaches aggregation system processor performs update operations through incremental updates and writing them into the log relation maintained in the memory as detailed in col 4, line 45-50, further it is noted that Bowen also teaches 'aggregate change log comprising a summary of changes in said added change log and any previous change logs' [see col 4, line 31-36], aggregate change log comprising a summary of changes corresponds to Bowen's aggregation system enables to update, read data values that including summary data values which are frequently updated as detailed in col 4, line 32-34, aggregate change log corresponds to updating aggregation values related to update

operations by receiving the incremental updates from the computer and writing them into the log relation maintained in the memory as detailed in col 4, line 45-50.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Bowen et al., into optimization of synchronization procedures that utilize a change log system of Birkler because both are directed to database management system, more specifically Birkler directed to synchronization method in storing a change log having an associated change counter at a first database, updates the change counter at the first database in response to a database update command from a second database [see Abstract], while Bowen et al is directed to database management system which aggregation processor performs update operations by receiving the incremental updates from the computer and writing them into the log relation maintained in the memory [see fig 2, element 35, col 4, line 45-50]. One of ordinary skill in the art at the time of the inventing would have been motivated to modify the Birkler's reference, more specifically Birkler's fig 2 to incorporate the aggregation system fig 1, element 30 of Bowen et al. because that would have allowed users of Birkler optimization of synchronization procedures that utilize a change log system to control the aggregation system processor to update and maintain in the log, bringing the advantages of avoiding locking of database records for extended period of time, further greater levels of improving concurrency as suggested by Bowen et al [see col 4, line 15-27].

3. As to Claims 2 and 9, Birkler teaches a system which including 'retrieving information for a valid item' [page 10, line 16-20], 'updating a location of said valid item in said map' [page 12, line 4-7]. On the other hand, Bowen teaches 'updating a map of said aggregate log, said map storing meta-data' [col 5, line 12-19], 'writing said item to said aggregate log' [col 4, line 45-50].

4. As to Claim 3, Bowen teaches a system which including 'compacting said aggregate log if a compact threshold is exceeded' [col 4, line 60-66, col 5, line 1-6].

5. As to Claim 4-6, Birkler teaches a system which including 'application data comprises data classes for contacts, calendar events, email messages, notes tasks, and files' [page 6, line 26-28].

6. As to Claim 10, Bowen teaches a system which including 'aggregate log' [see fig 1-2].

7. As to Claim 12, Birkler teaches a system which including 'log includes an identifier for a change' [page 3, line 13-17, line 26-28], Birkler specifically suggests for example unique identification of record in the database for update or change by means of unique identification.

8. As to Claim 13, Bowen teaches a system which including 'aggregate log includes requesting a binary delta for a file' [fig 4, col 2, line 61-65].



9. As to Claim 14-16, Bowen teaches a system which including 'aggregate log' [Abstract, col 6, line 49-60, fig 3-4].

10. As to Claim 17, Bowen teaches a system which including 'iterating over each record in the aggregate log' [53-59], 'reading valid records' [col 6, line 43-48, col 7, line 20-24], 'writing valid records back to the aggregate log overwriting obsolete records' [col 6, line 61-63, col 7, line 34-40].

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Birkler, WO 00/29998, Bowen et al., [hereafter Bowen], US Patent No. 5832519 as applied to claim 1 above, and further in view of Williams et al., [hereafter Williams], US Patent No. 5845283.

12. As to Claim 7, both Birkler and Bowen do not specifically teach 'universal data Format', on the other hand, Williams specifically teaches converting data formats into a common, universal data format [see col 2, line 14-16].

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Williams into Birkler and Bowen et al of database management system because they all are directed to database management [see Birkler: Abstract; Bowen: Abstract; and Williams: Abstract], also one of the ordinary skill in the art at the time of the invention would have been motivated to incorporate the teachings of Williams's universal data format because that would have allowed users of

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Birkler, Bowen to receive any data format and converting into predetermined universal data format bringing the advantages of greater flexibility of translate between multiple data formats [see col 2, line 9-23].

### ***Response to Arguments***

Applicant's arguments filed on 12/17/2003, paper no. # 19, Claims 1-18 have been fully considered but they are not persuasive, for examiners' response, see discussion below:

It is noted that Applicant's remarks, at pages 6-12 of the response, are merely conclusory statements, without any support. Applicant merely repeating the language of claim, without addressing Examiner's particular interpretation of the reference, as presented in the previous Office action, and without specifying how the instant amendments address the issues raised by Examiner. Accordingly, Examiner repeats the arguments previously presented.

- a) At page 6, line 16-17, Claims 1,8,11,18, applicant argues "neither reference teaches a fundamental limitation of the present invention, that of an "aggregate change log". In both references, the techniques described a database or application data, not a change log or aggregate change log which is then used to update application data.
- b) At page 7, Bowen et al., there is no creation of, or suggestion to create, an aggregate change log

As to the above arguments [a-b], in the previous and present office action, examiner clearly stated that Birkler reference does not teach "aggregate change log", although Birkler does teach optimization of change log, more specifically, storing change logs that are associated with the databases, i.e., performing updates in accordance with the received entries of the change log, even though only a portion of the transferred change log is actually received [see page 4, line 11-14] with respect to initiation of synchronization. On the other hand, Bowen et al., disclosed 'aggregate change log' col 3, line 33-40, col 4, line 45-50, further it is noted that Bowen also teaches 'aggregate change log comprising a summary of changes in said added change log and any previous change logs' [see col 4, line 31-36], aggregate change log comprising a summary of changes corresponds to Bowen's aggregation system enables to update, read data values that including summary data values which are frequently updated as detailed in col 4, line 32-34, aggregate change log corresponds to updating aggregation values related to update operations by receiving the incremental updates from the computer and writing them into the log relation maintained in the memory as detailed in col 4, line 45-50.

- c) At page 7, applicant argues, Bowen et al does not teach an aggregate change log.
- d) At page 8-9, applicant argues, Bowen et al, makes clear that the base log is equivalent to a database in the claim, while a incremental log is equivalent to change log. There is no aggregate change log.

As to the arguments [c-d], examiner disagrees with the applicant because firstly, Bowen is directed to updating database values, more specifically using aggregation processor that is part of aggregation system. [see Abstract], It is also noted that aggregation system is also responsible for incremental updates to the database [see Abstract], secondly, Bowen teaches both base relation, and log relation [see fig 3-4], also it is noted that both base relation and log relation are associated with respective timestamp [see fig 3-4], thirdly, Bowen also teaches aggregate record in the database have two values such as high and low values, a particular value of aggregate record are obtained [col 3, line 33-40], also aggregation system has the ability to update operations by receiving the incremental updates and writing them into log relations as detailed in fig 3-4, col 4, line 45-50 , further this aggregate change log also represents summary of overall changes. Hence, Bowen teaches aggregate change log in the content of generation of an aggregate change log.

e) At page 9, applicant argues "the base log is, at most, the application data which is to be updated, not an aggregate change log.

As to the above argument [e], as best understood by the examiner, Bowen et al., specific teaching directed to both base relation as well as log relation, both base relation and log relation are associated with timestamp, further it is noted each data value is associated with high and low values and it is part of aggregate record in the database as detailed in col 3, line 33-37, also it is noted that aggregation system specifically

processes update operations with respect to log relation maintained in the database as detailed in col 4, line 48-50, Bowen teaches aggregate change log in the content of generation of an aggregate change log.

f) Applicant's repeated assertion in the response that Bowen et al do not teach "aggregate change log" [page 10—11] and that aggregate change log are part of updating database or data processing system environment, are not persuasive, because Bowen et al clearly provide not only base relation, log relation as detailed in fig 3-4, but also both base relation and log relation are associated with time stamp, also Bowen specifically suggests database stores possible both high and low values of a particular data that related to aggregate record [col 3, line 33-37]. Also, as discussed above, the aggregation system processes update operations with respect to both base relation and log relation, hence forming aggregate change log.

g) As best understood by the Examiner, the only substantive amendments to the claims involve changing the language "aggregate change log, the aggregate change log comprising a summary of changes ....." [claim 1]. However, it is unclear to Examiner how this change in any way distinguishes the claimed invention from the system of Birkler et al., in view of Bowen et al. when Bowen et al., specifically assert that "aggregation processor is integral part of aggregation system that updates, control the aggregation of base and log relations [see Abstract, fig 3-4, col 3, line 33-37]. Since Applicant has not specified how the amended language distinguishes the claimed

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invention from Birkler et al., in view of Bowen et al. beyond simply assenting that it does without any further support, Examiner is unable to determine how the above noted language distinguishes the claimed invention from at least these citations from the Bowen et al., which indicate both base relation, log relation and their respective timestamp associated with incremental updates, control the aggregation of base relation that forms aggregate change log.

Therefore, Applicant's remarks are deemed not to be persuasive, and Claims 1- 6,8-18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Birkler, WO 00/29998 in view of Bowen et al., [hereafter Bowen], US Patent No. 5832519.

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**Conclusion**

**The prior art made of record**

- a. WO 00/29998
- b. US Patent No. 5832519
- c. US Patent No. 58452836

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure


- d. US Patent No. 6457062
- e. US Patent No. 6401104
- f. US Patent No. 6034621
- g. US Patent No. 6058399
- h. US Patent No. 5758150
- i. US Patent No. 5649195
- j. US Patent No. 2002/0138765
- k. US Patent No. 5729735
- l. EP1180890
- m. US Patent No. 6397351

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is (703) 308-8538. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM Eastern Time. The TC2100's Customer Service number is (703) 306-5631.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene, can be reached on (703) 305-9790. The fax phone numbers for the organization where the application or proceeding is assigned are as follows:

703/746-7238	<b>(After Final Communication)</b>
703/872-9306	<b>(Offical Communications)</b>
703/746-7240	<b>(For Status inquiries, draft communication)</b>

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

sc   
Patent Examiner.  
March 4, 2004.